FIG.1

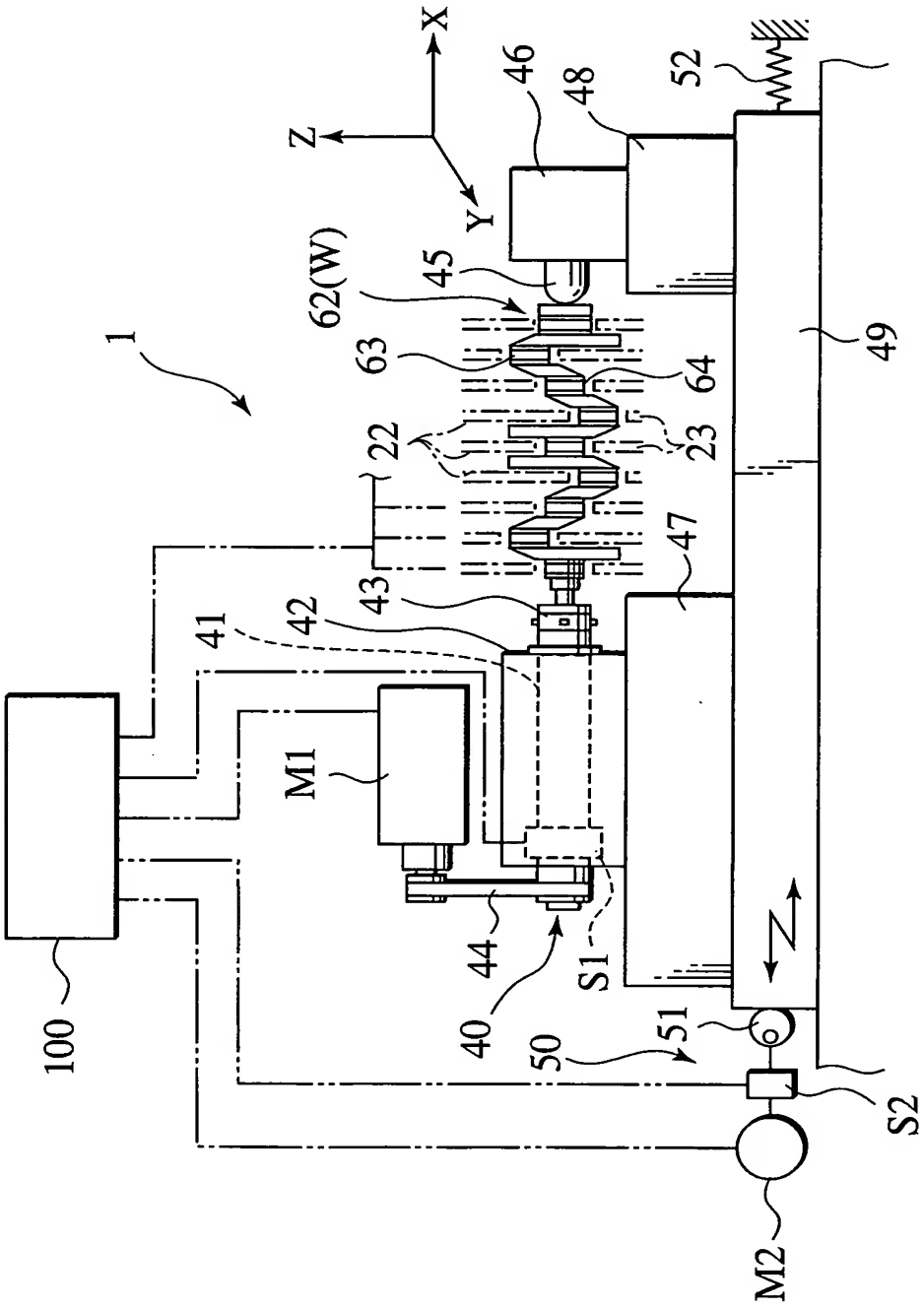
X
Z
Y
1
62(W)
45
46
48
52
49
63
64
22
23
47
43
42
41
M1
100
44
40
S1
50
51
S2
M2

FIG.2

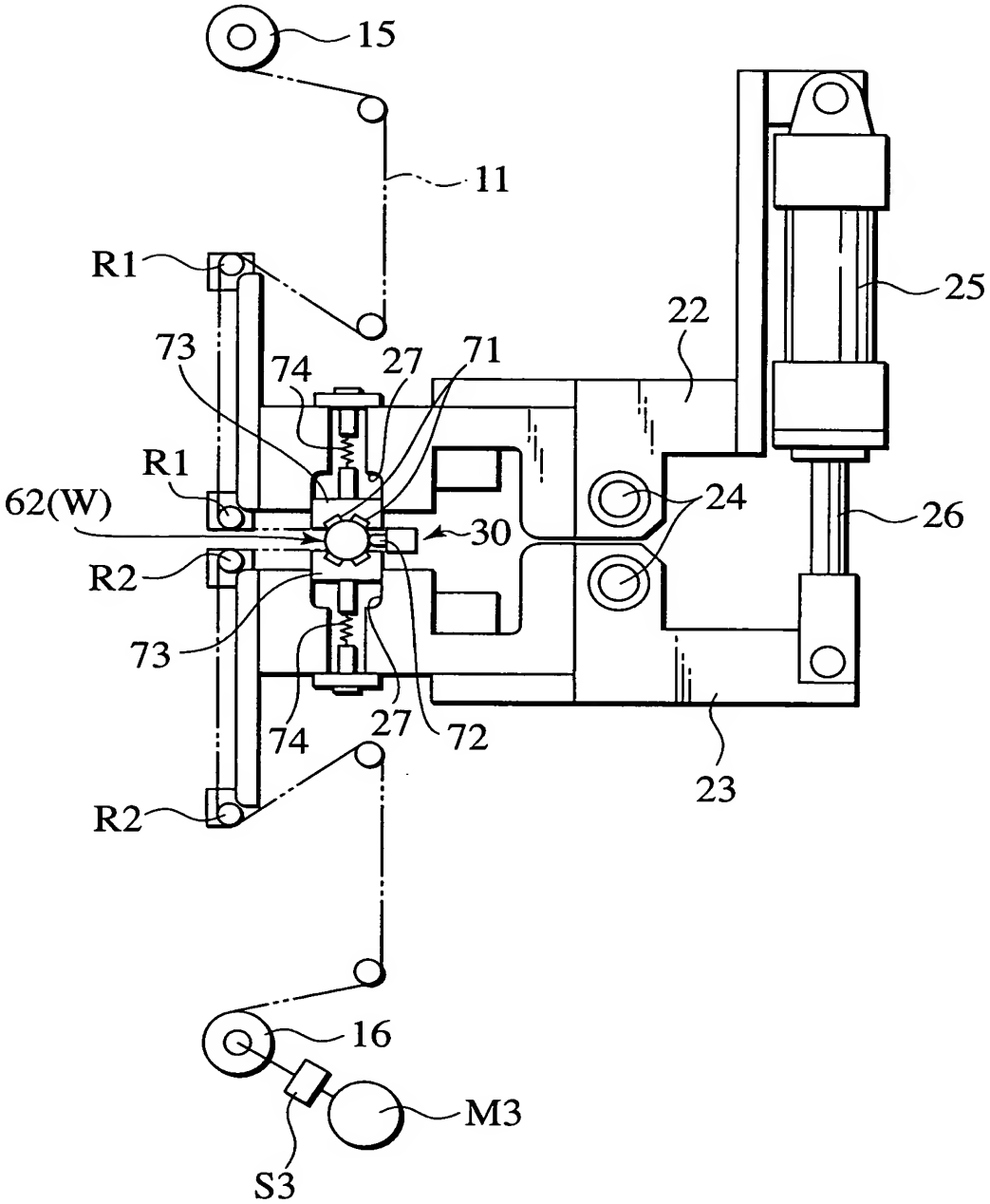

FIG.3

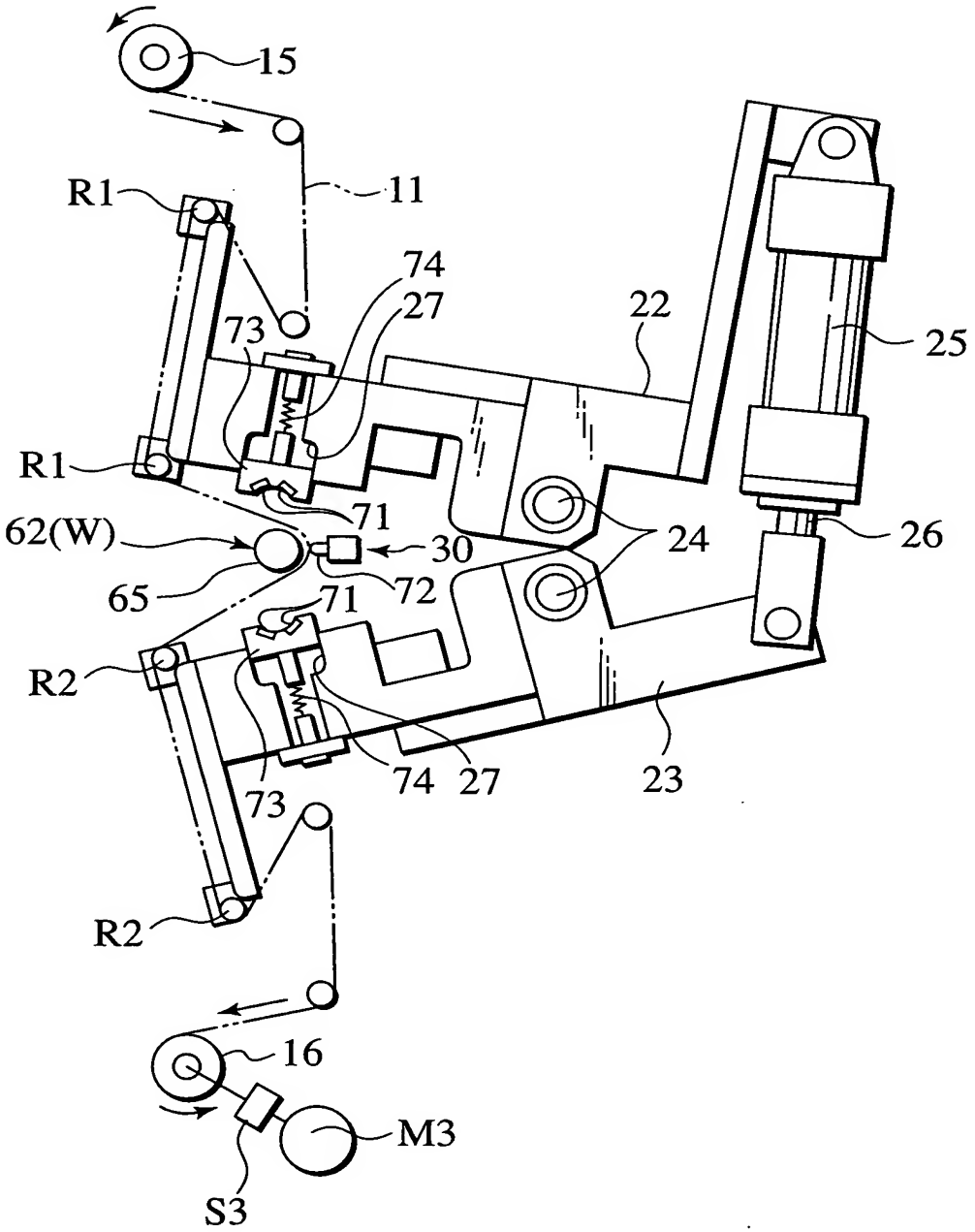
15
11
R1
74
27
73
22
25
R1
71
62(W)
30
24
26
65
71
72
R2
74
27
23
73
R2
16
M3
S3

FIG.4A

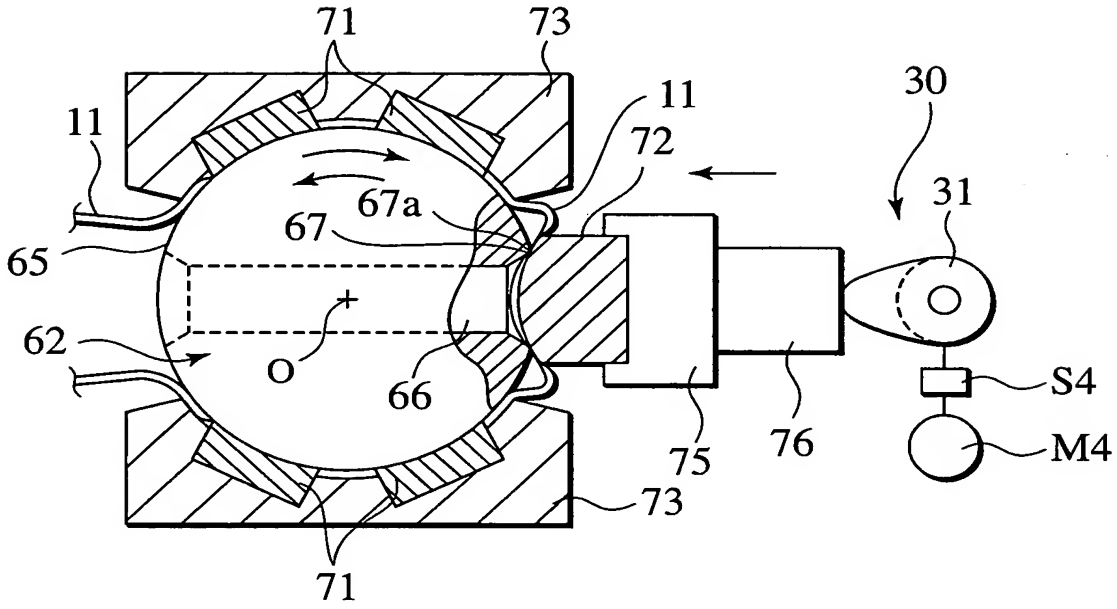
71
73
11
11
72
30
31
67a
67
65
62
O
66
75
76
S4
M4
73
71

FIG.4B

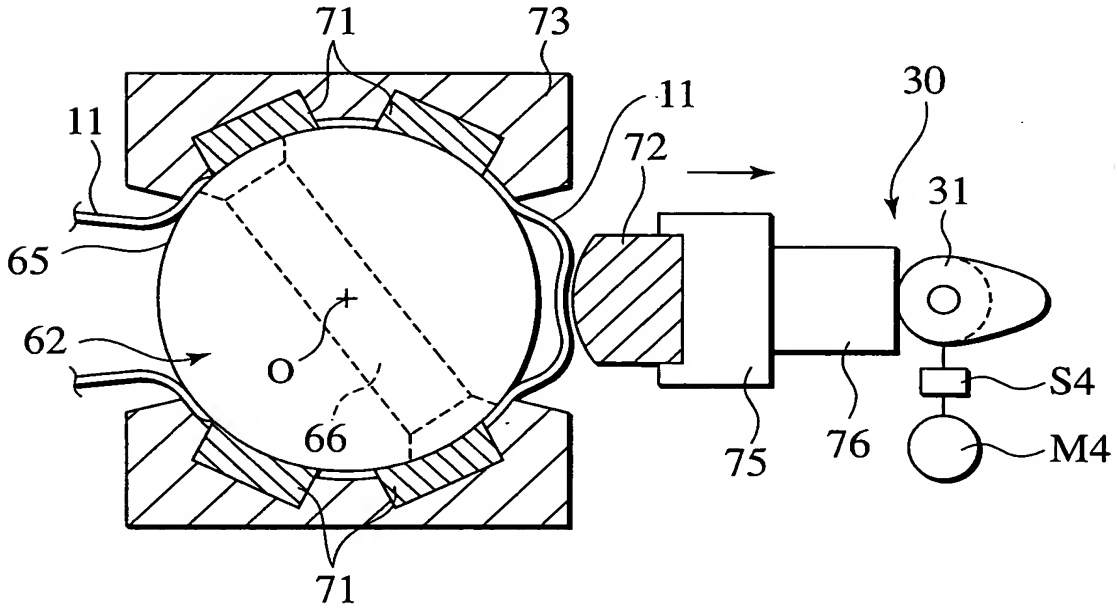
71
73
11
11
72
30
31
65
62
O
66
75
76
S4
M4
71

FIG.5A

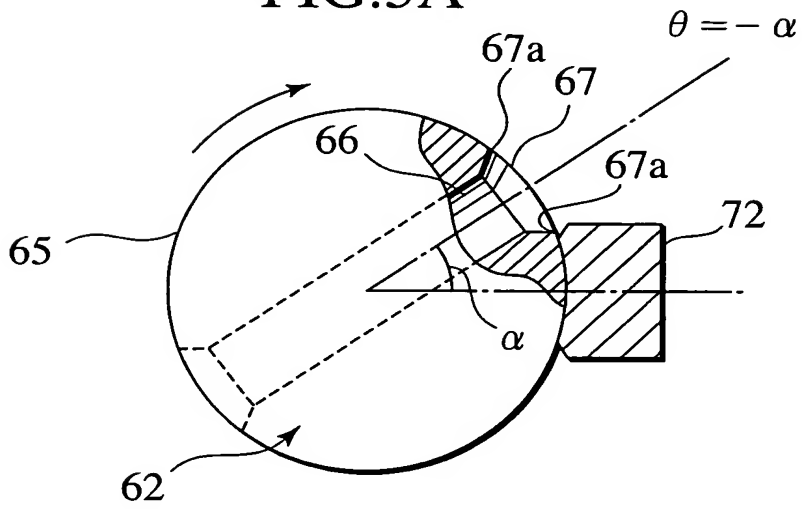

FIG.5B

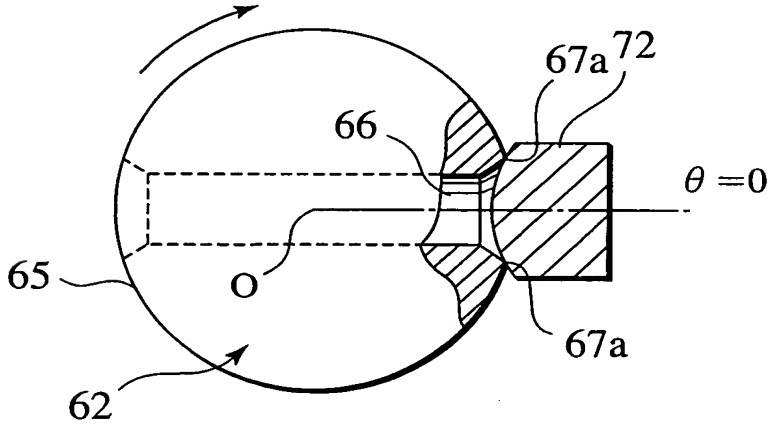

FIG.5C

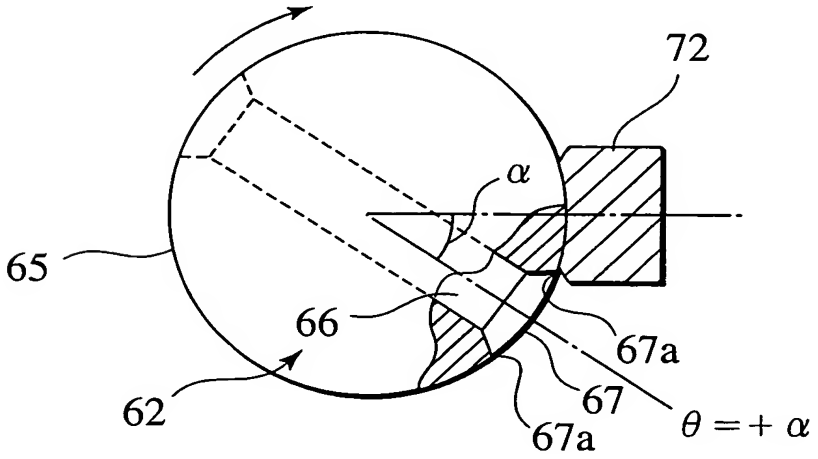

FIG.6A

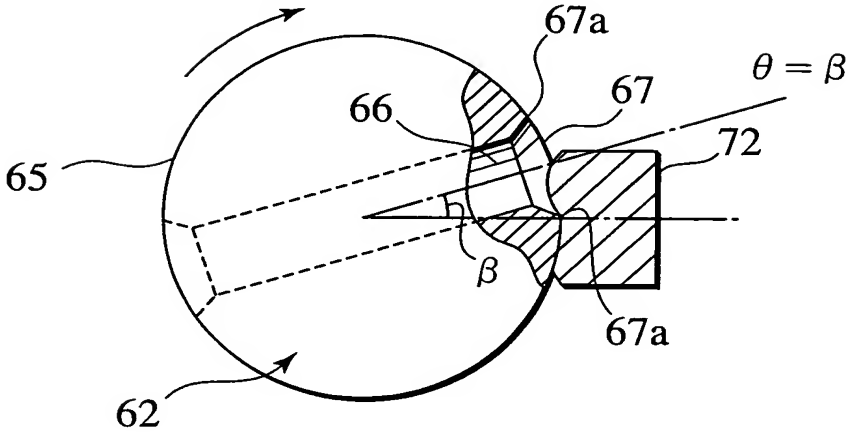

FIG.6B

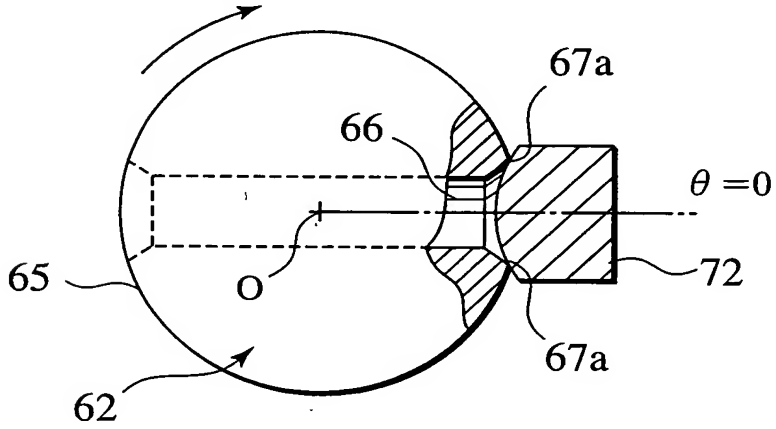

FIG.6C

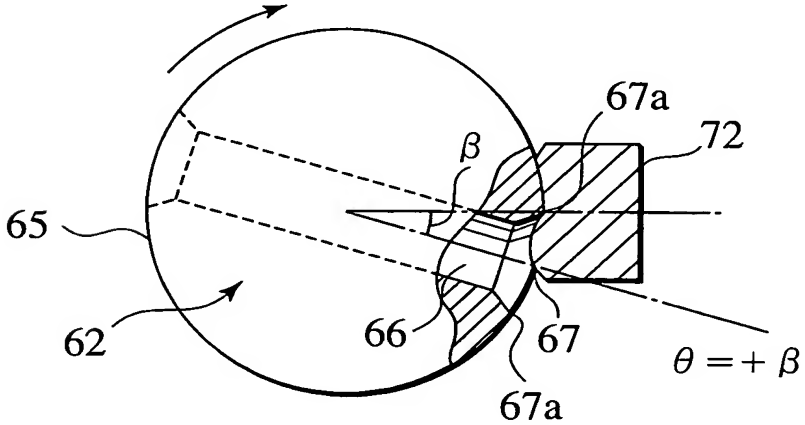

FIG.7A

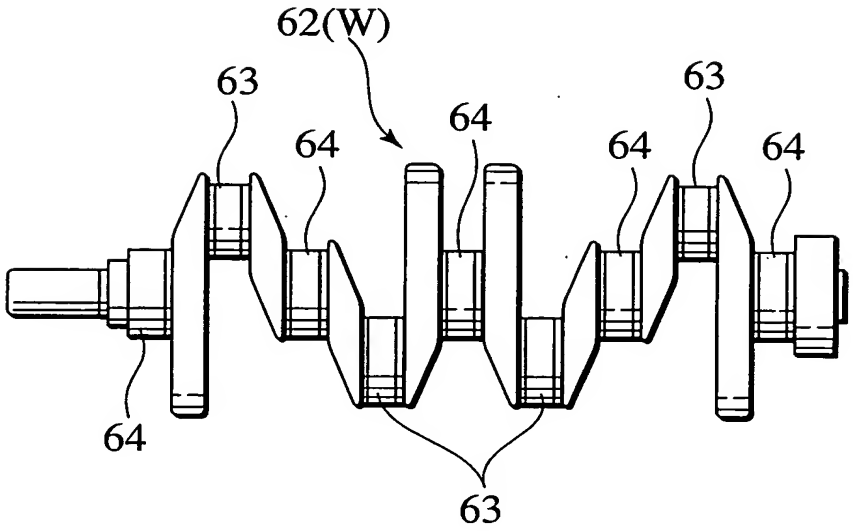

FIG.7B

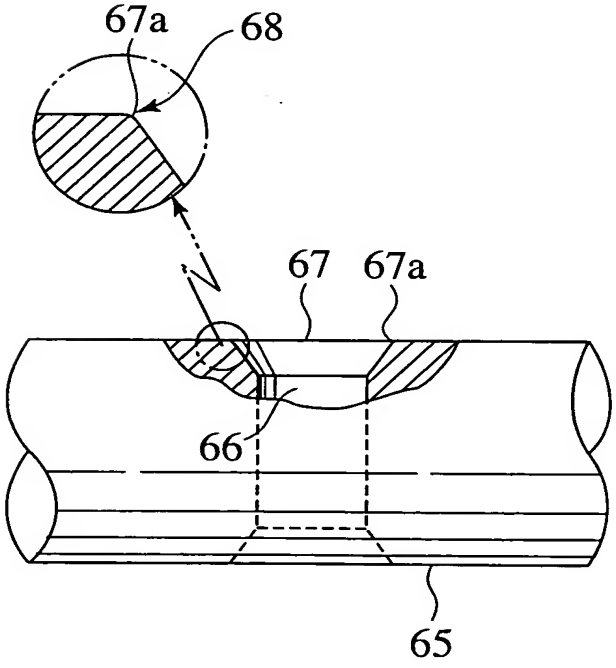

FIG.8

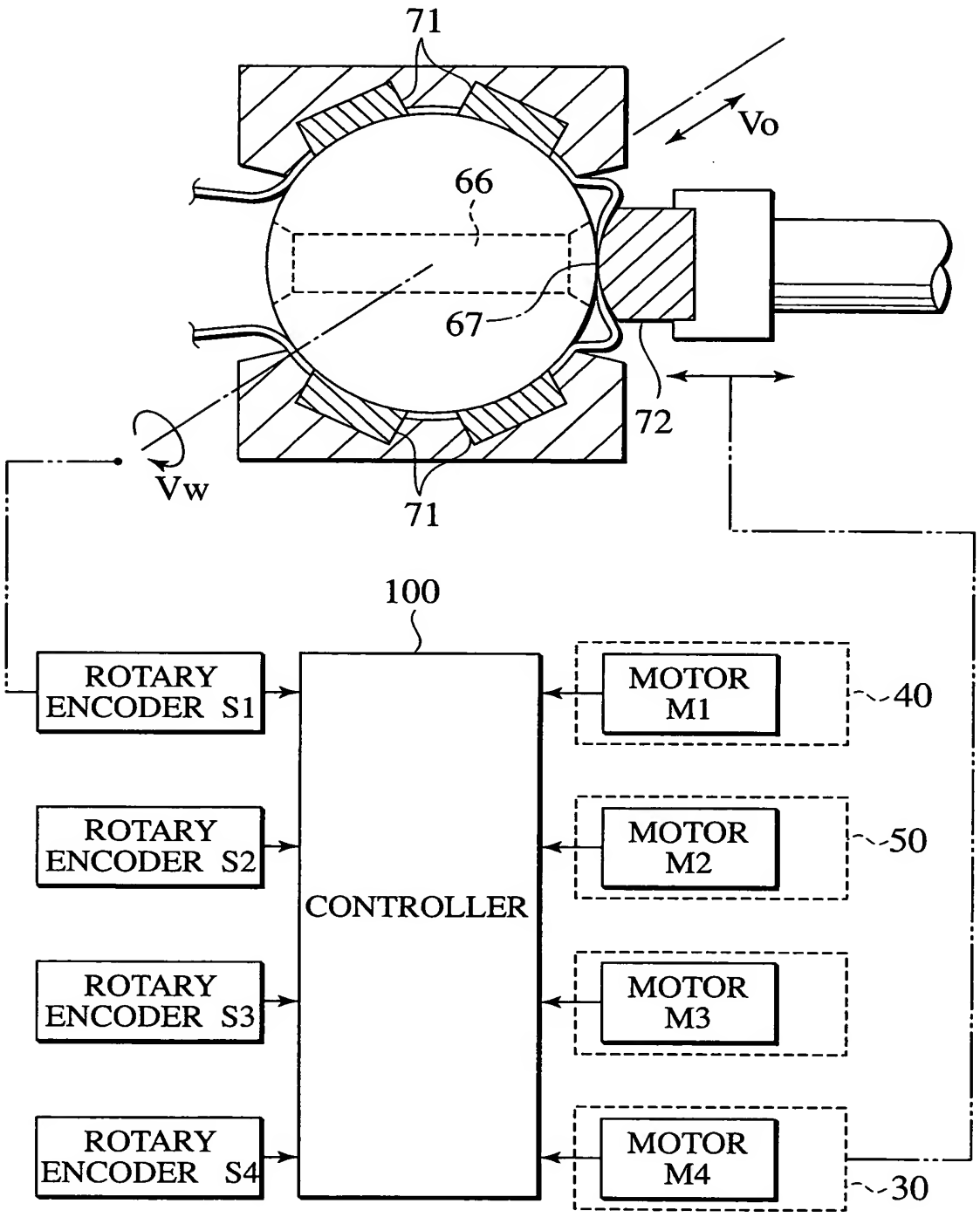
71
Vo
66
67
72
Vw
71
100
ROTARY ENCODER S1
ROTARY ENCODER S2
ROTARY ENCODER S3
ROTARY ENCODER S4
CONTROLLER
MOTOR M1
MOTOR M2
MOTOR M3
MOTOR M4
40
50
30

FIG.9

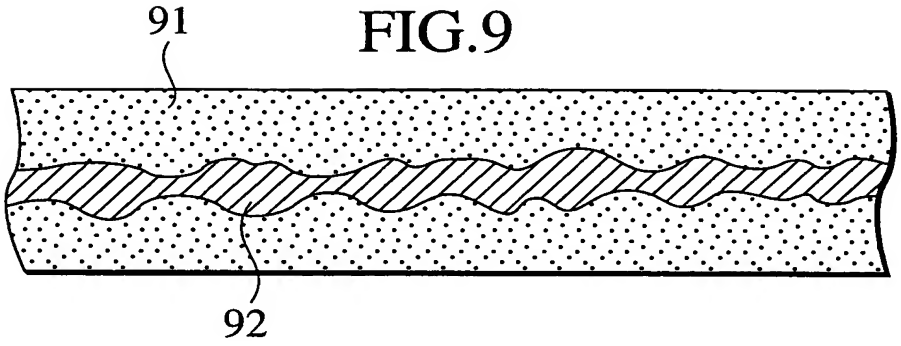

FIG.11A

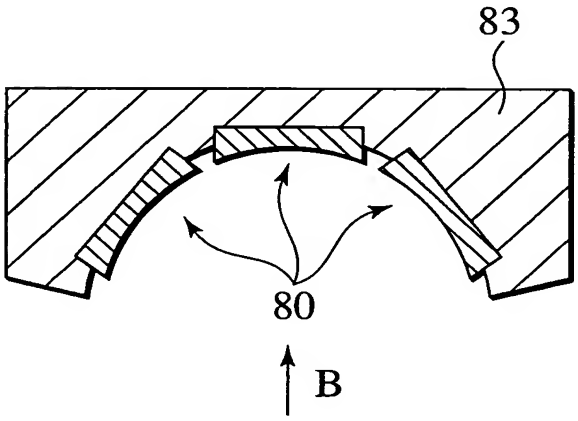

FIG.11B

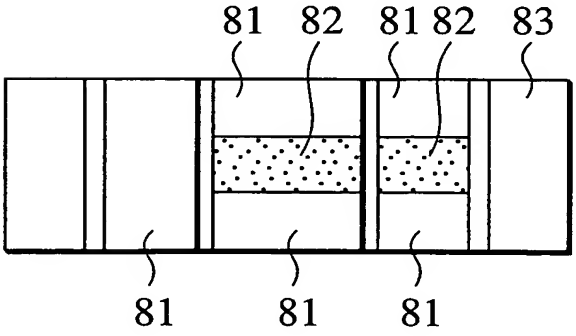

FIG.10

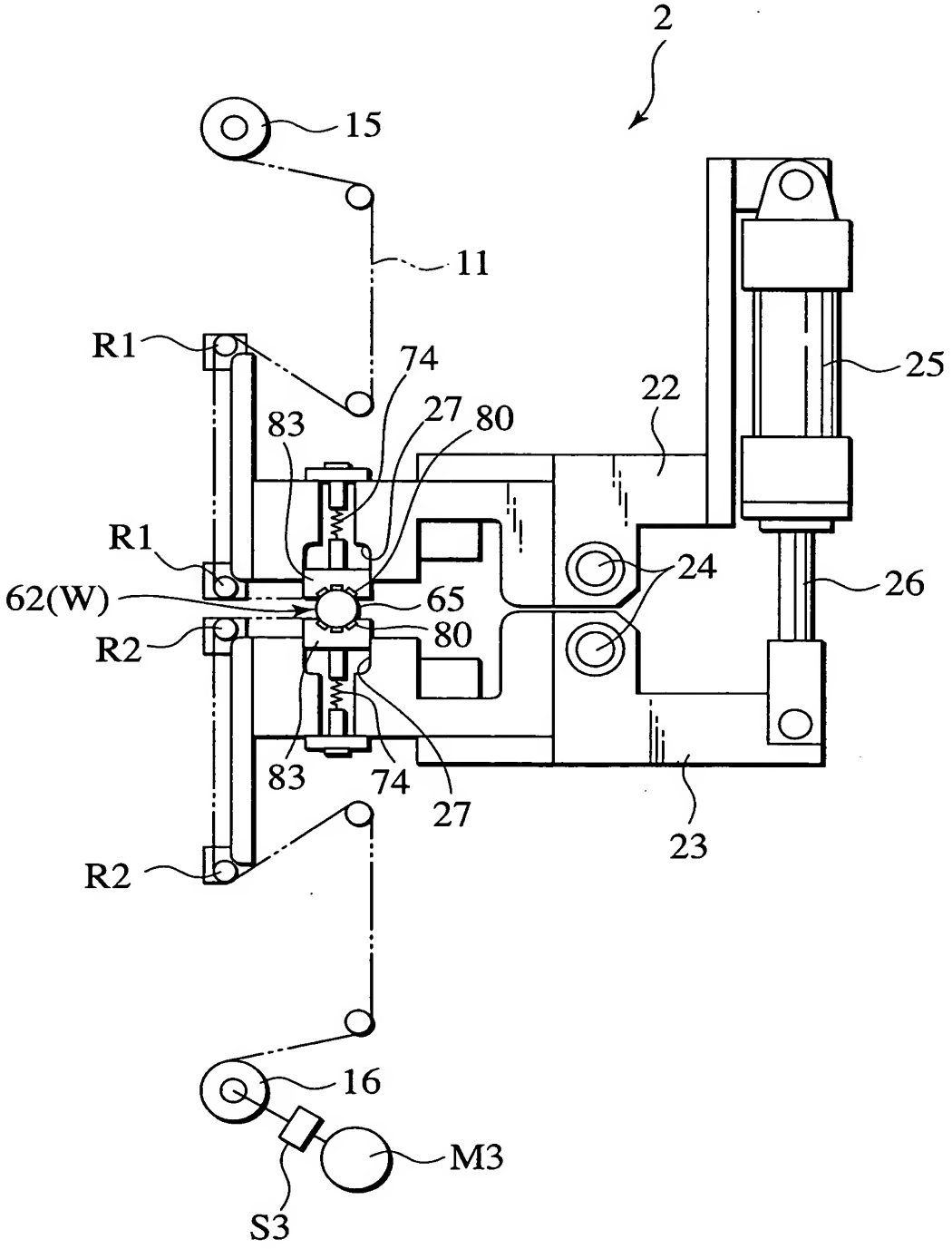
2
15
11
R1
74
27
80
83
22
25
R1
24
26
62(W)
65
80
R2
83
74
27
23
R2
16
M3
S3

FIG.12

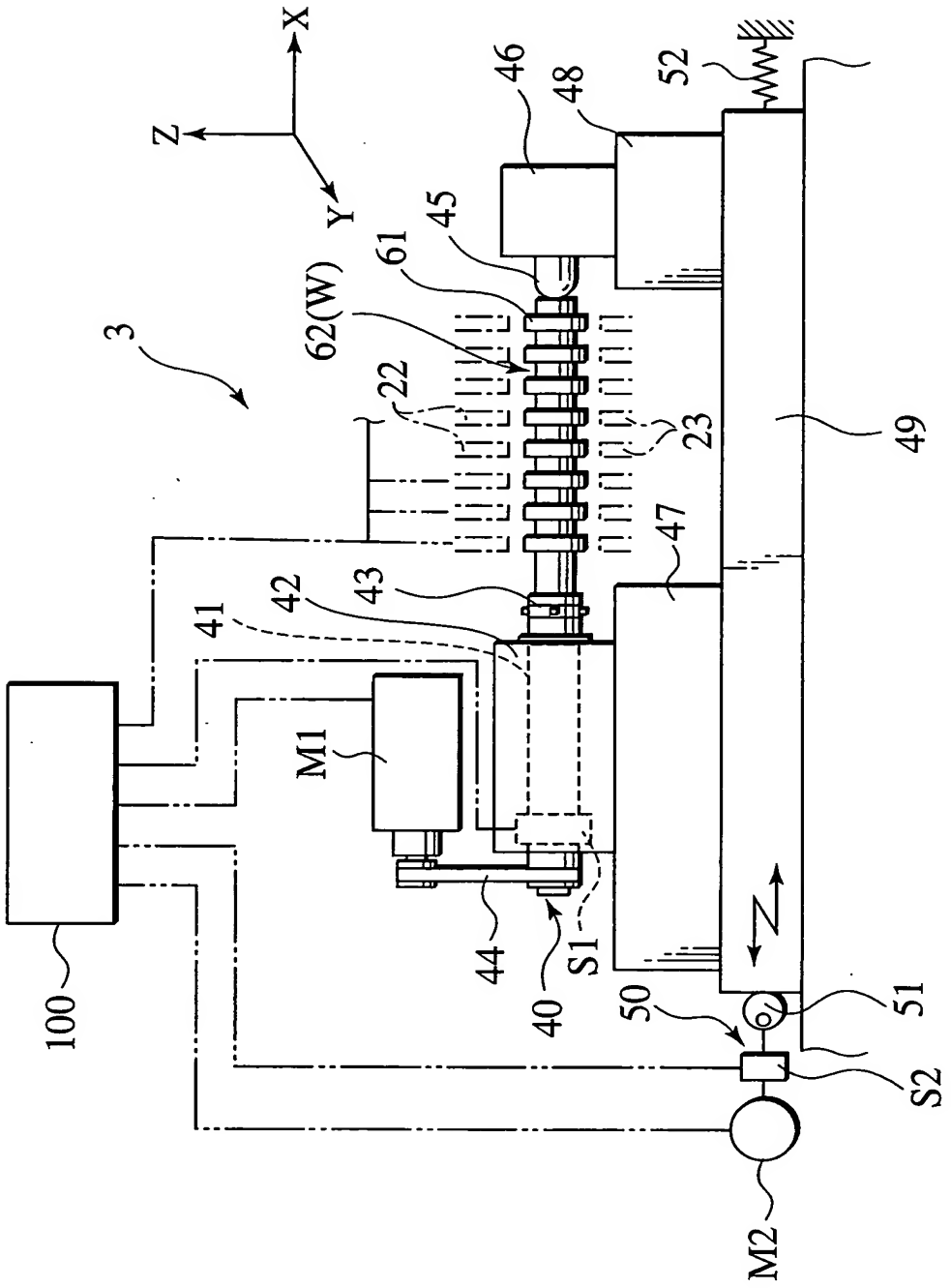
X
Z
Y
46
48
52
45
61
62(W)
3
22
23
49
47
42
43
41
M1
100
44
40
S1
50
51
S2
M2

FIG.13

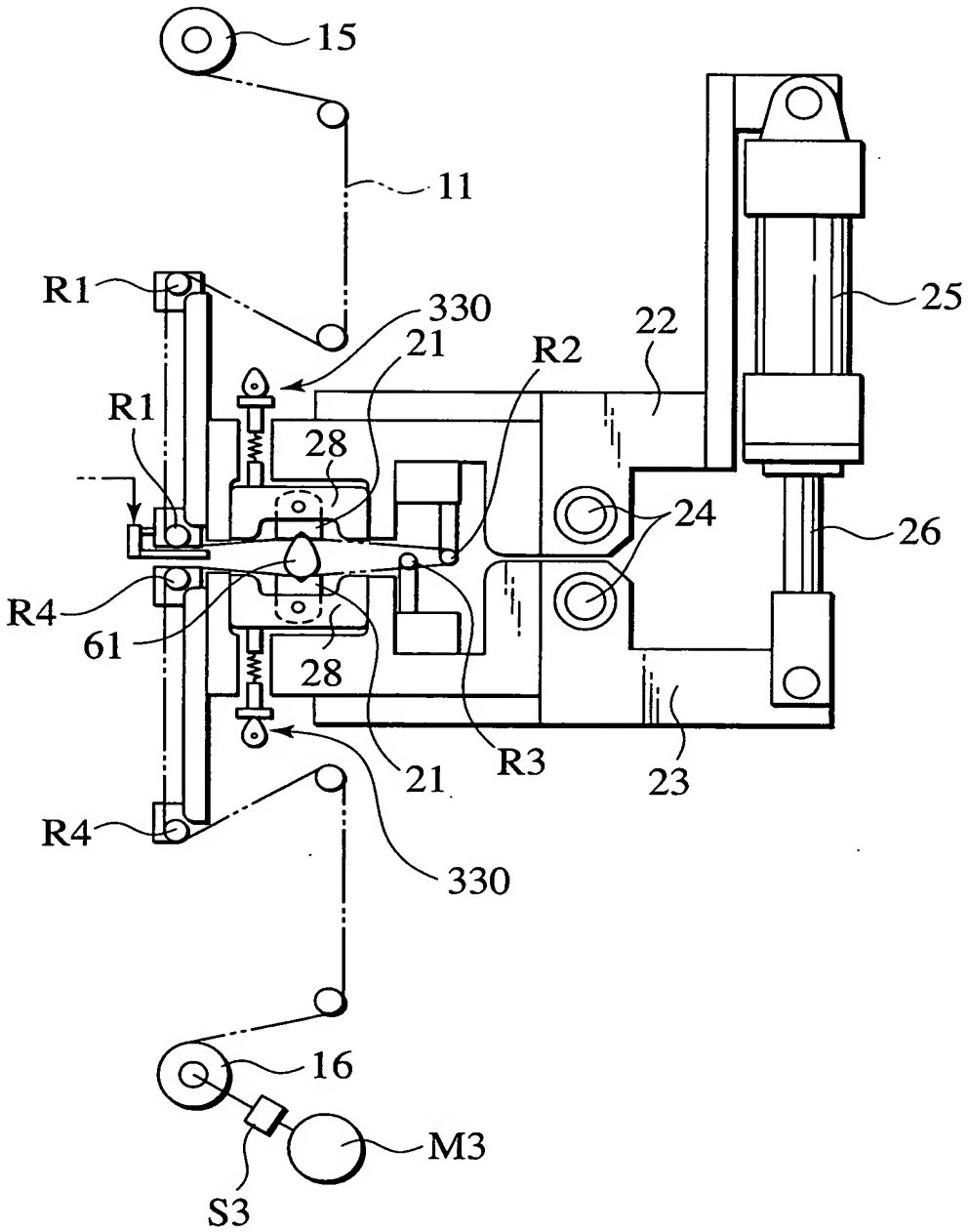

FIG.14

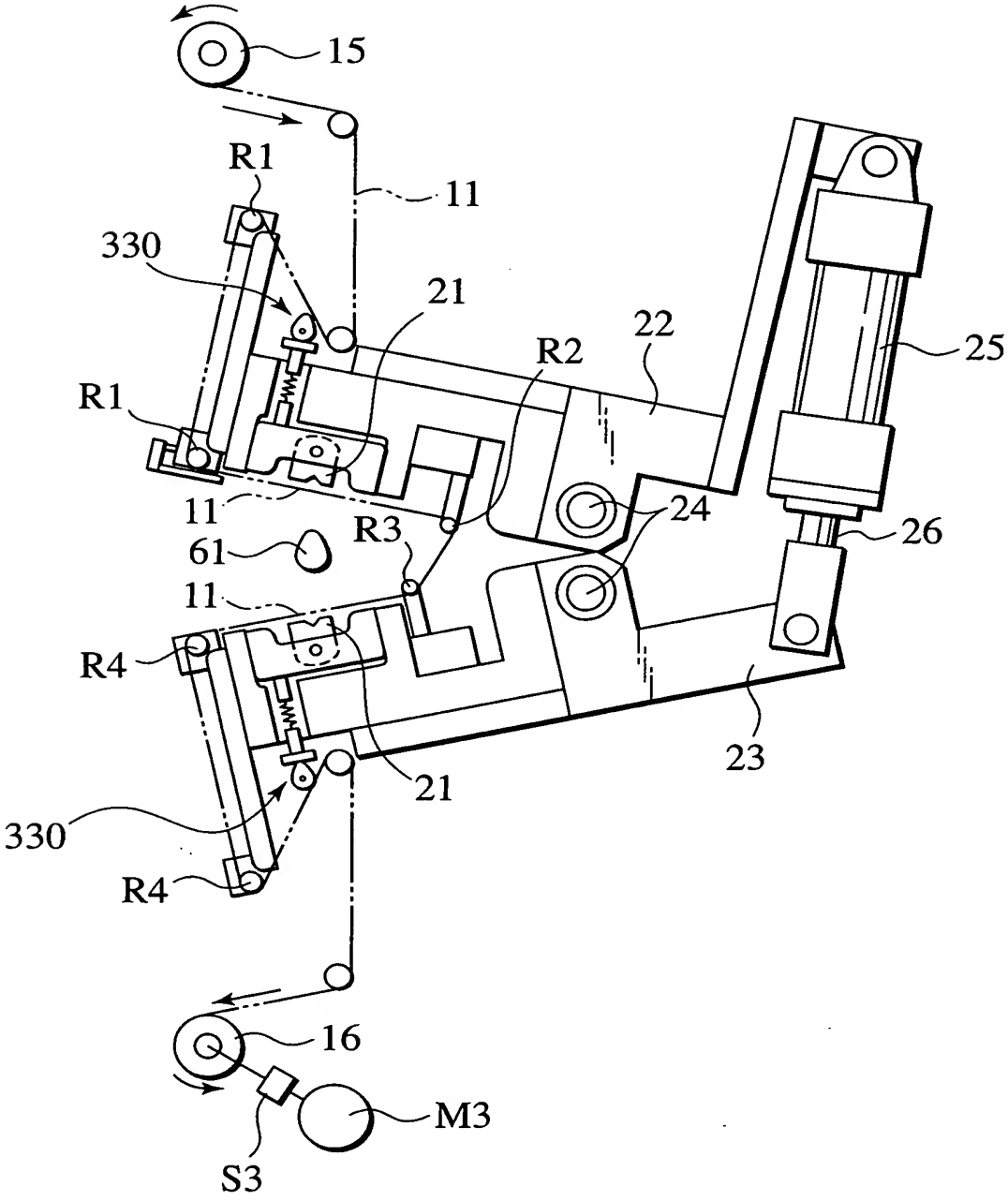

FIG.15

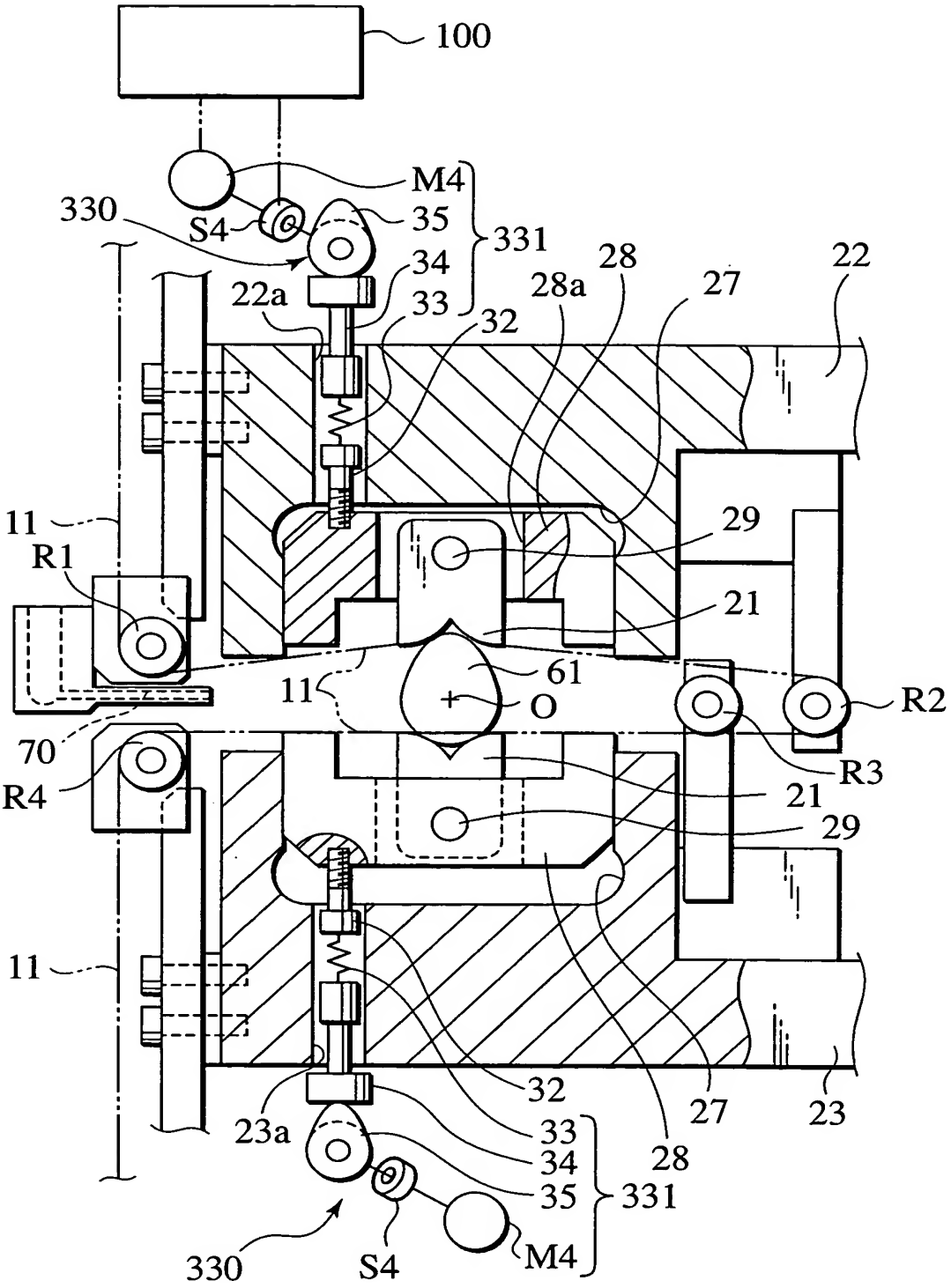
100
M4
330
S4
35
331
34
22a
33
32
28a
28
27
22
11
R1
29
21
61
11
O
R2
70
R3
R4
21
29
11
32
27
23
23a
33
34
28
35
331
330
S4
M4

FIG.16

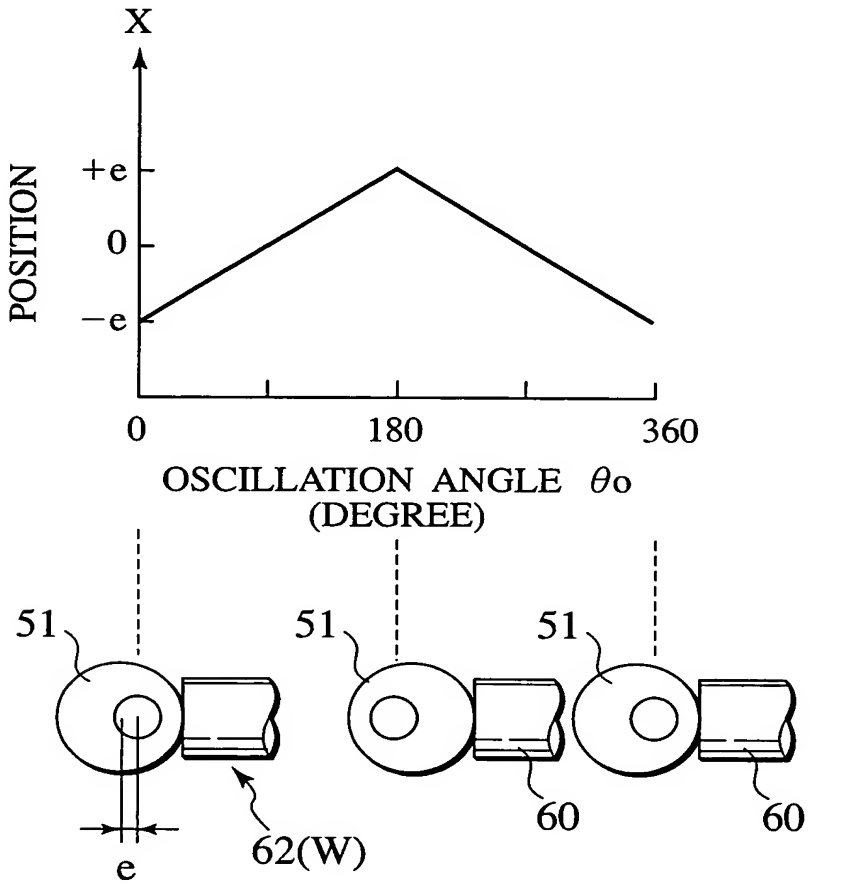
X
POSITION
+e
0
−e
0
180
360
OSCILLATION ANGLE θo
(DEGREE)
51
51
51
60
60
62(W)
e

FIG.17

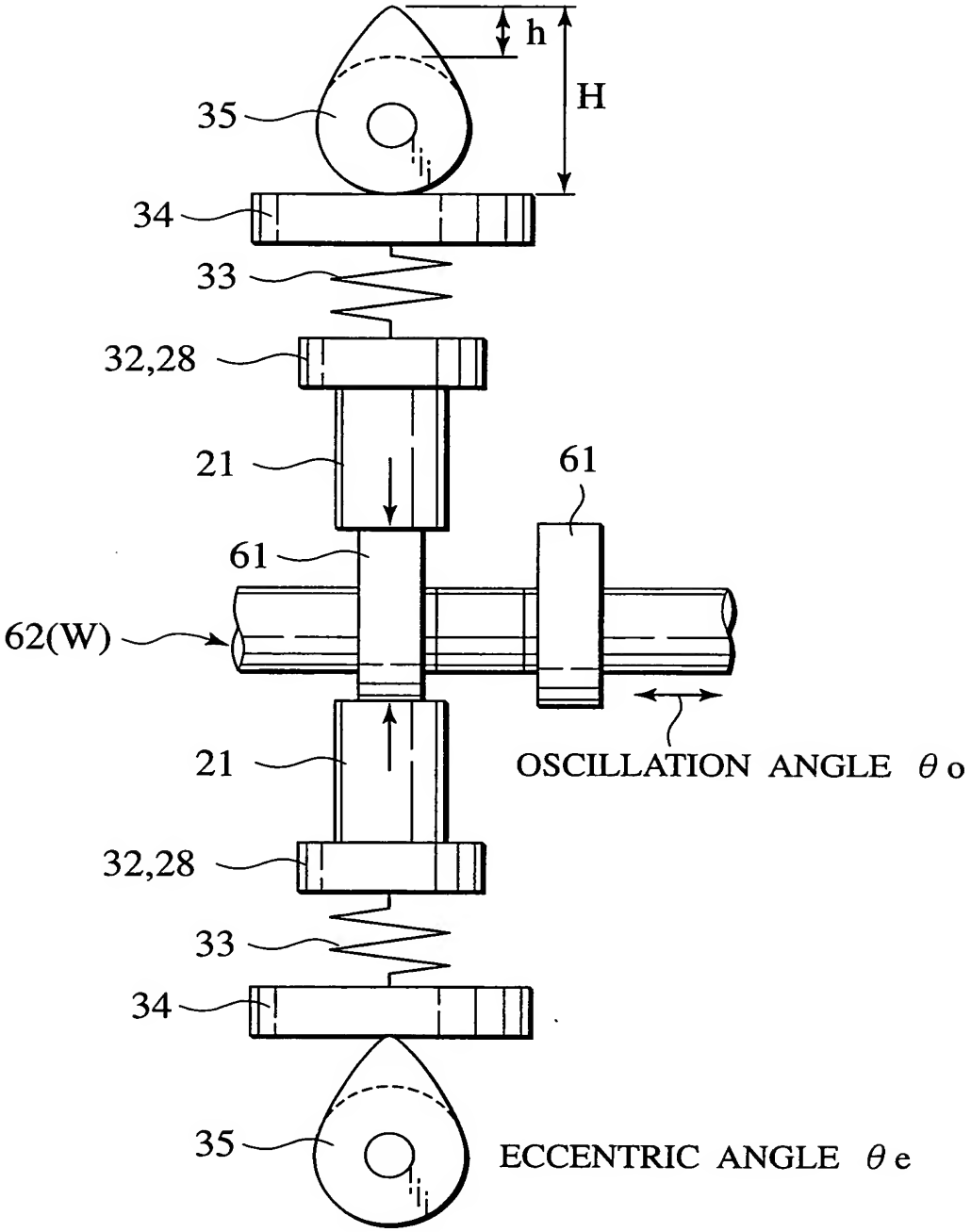
h
H
35
34
33
32,28
21
61
61
62(W)
21
OSCILLATION ANGLE θo
32,28
33
34
35
ECCENTRIC ANGLE θe

FIG.18

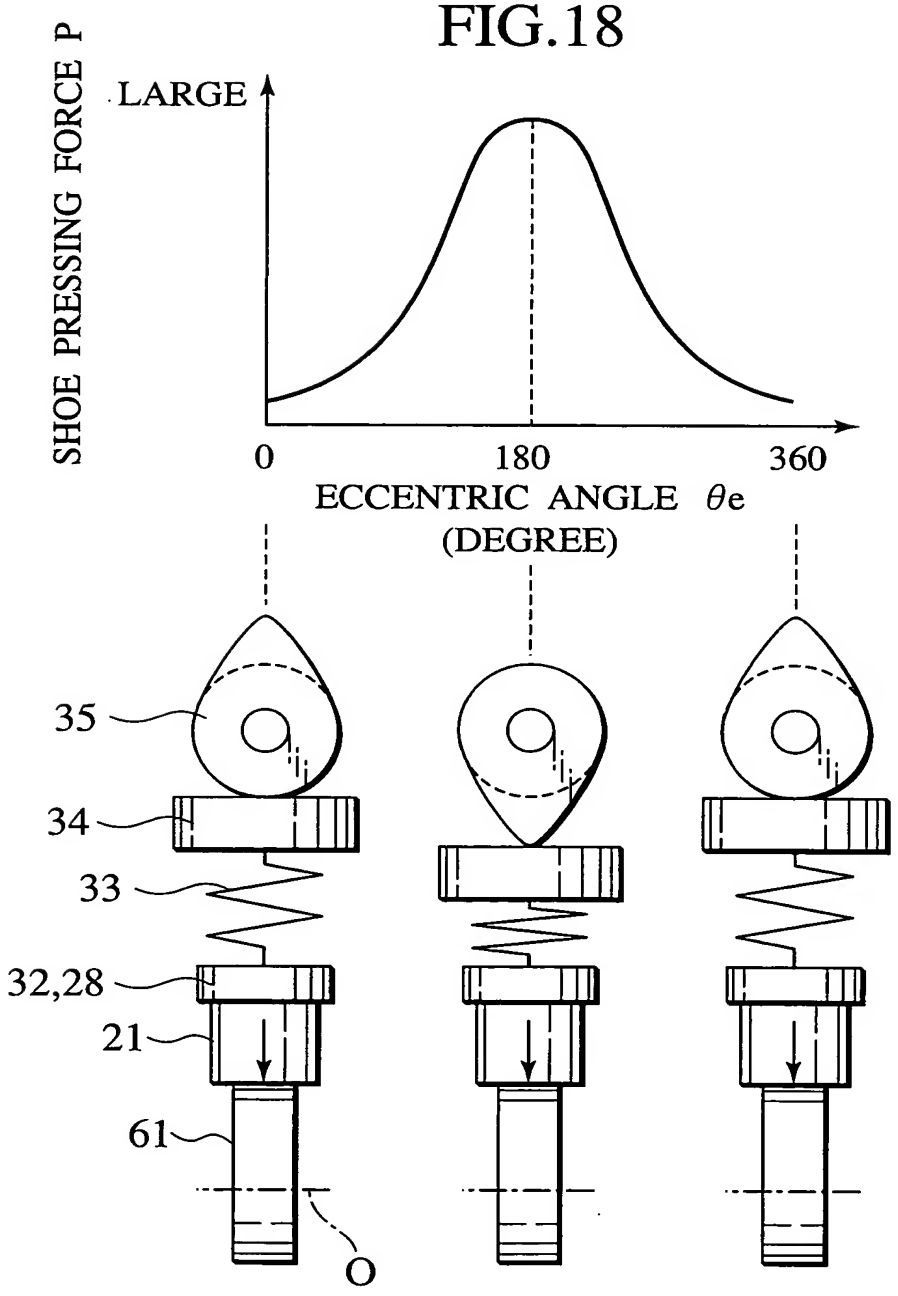
SHOE PRESSING FORCE P
LARGE
0
180
360
ECCENTRIC ANGLE θe
(DEGREE)
35
34
33
32,28
21
61
O

FIG.19A

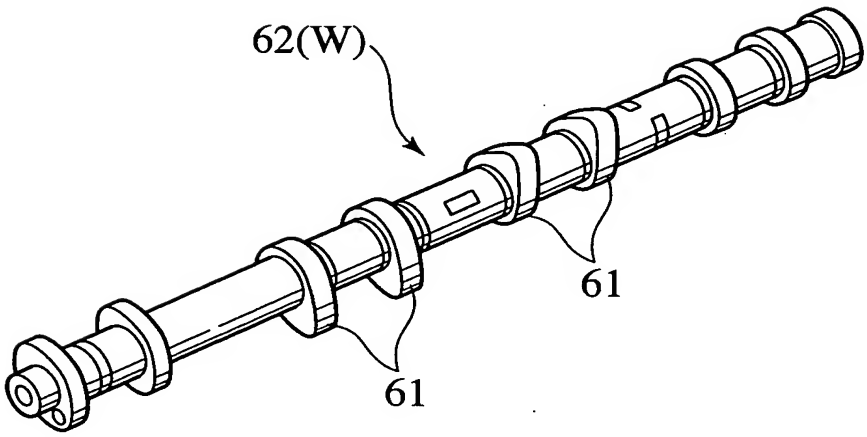

FIG.19B

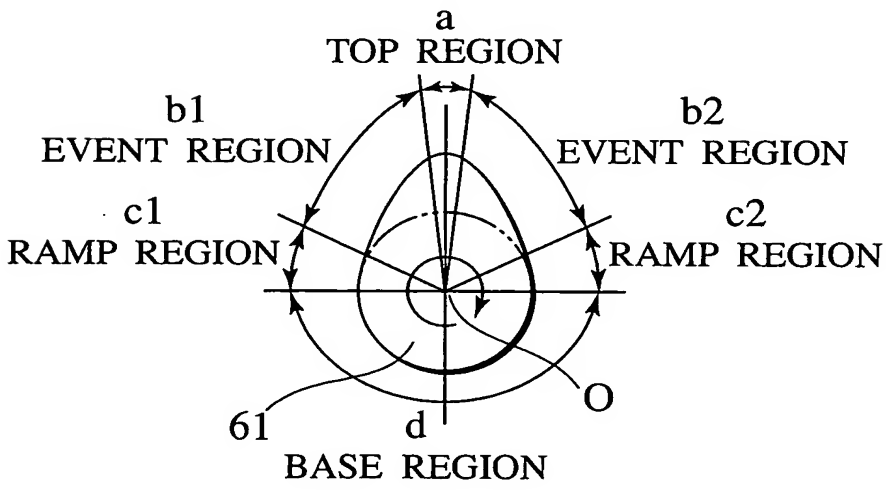

FIG.20A

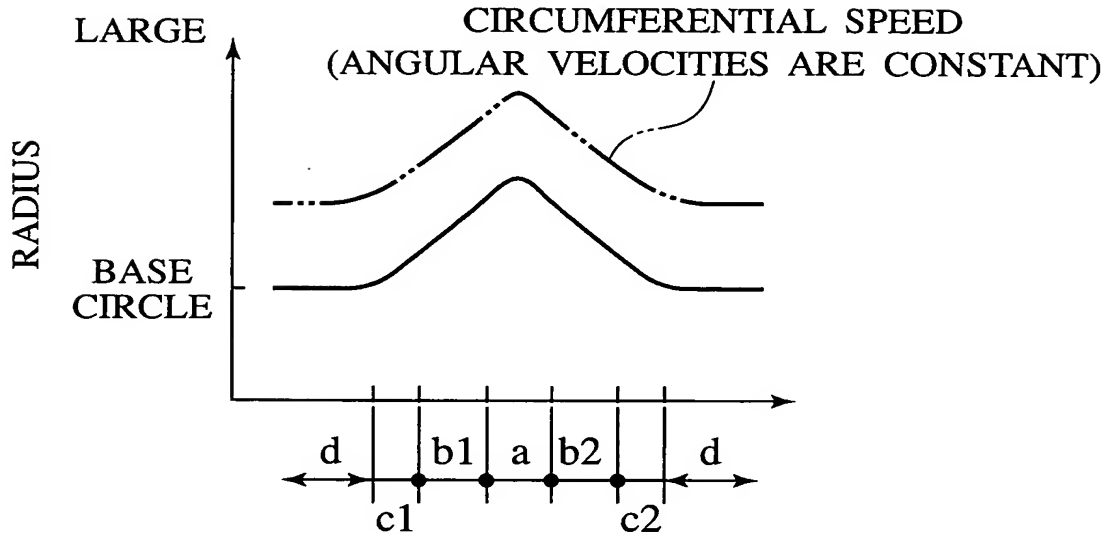

FIG.20B

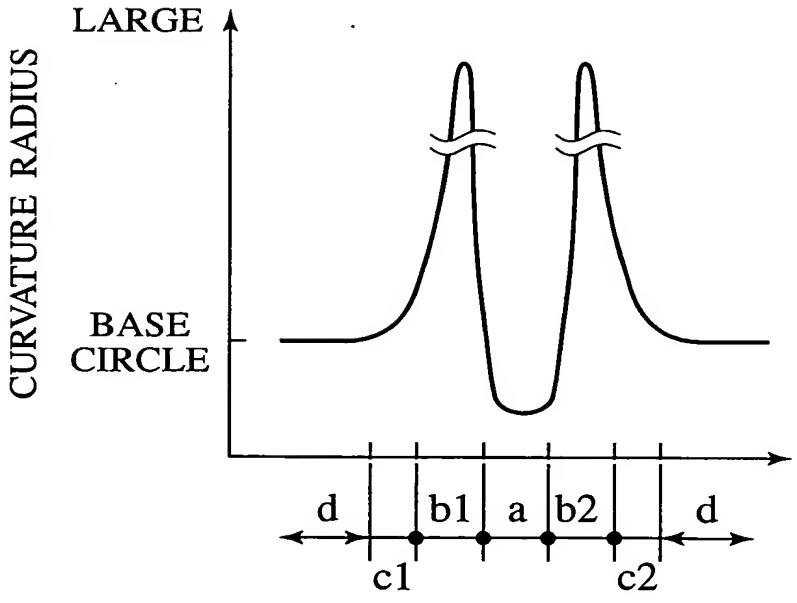

FIG.21

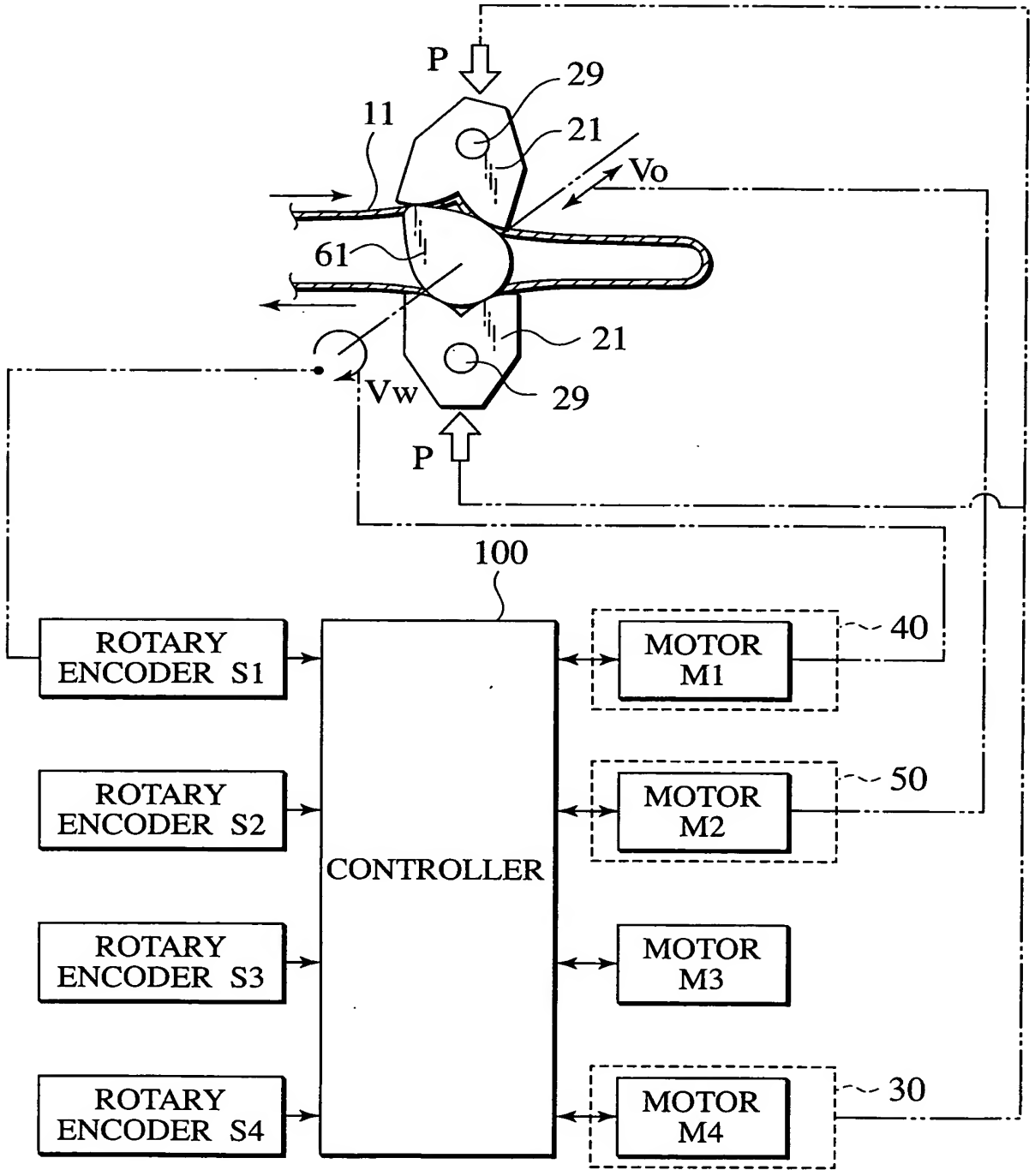
P
29
11
21
Vo
61
21
Vw
29
P
100
ROTARY ENCODER S1
ROTARY ENCODER S2
ROTARY ENCODER S3
ROTARY ENCODER S4
CONTROLLER
MOTOR M1
MOTOR M2
MOTOR M3
MOTOR M4
40
50
30

FIG.22A

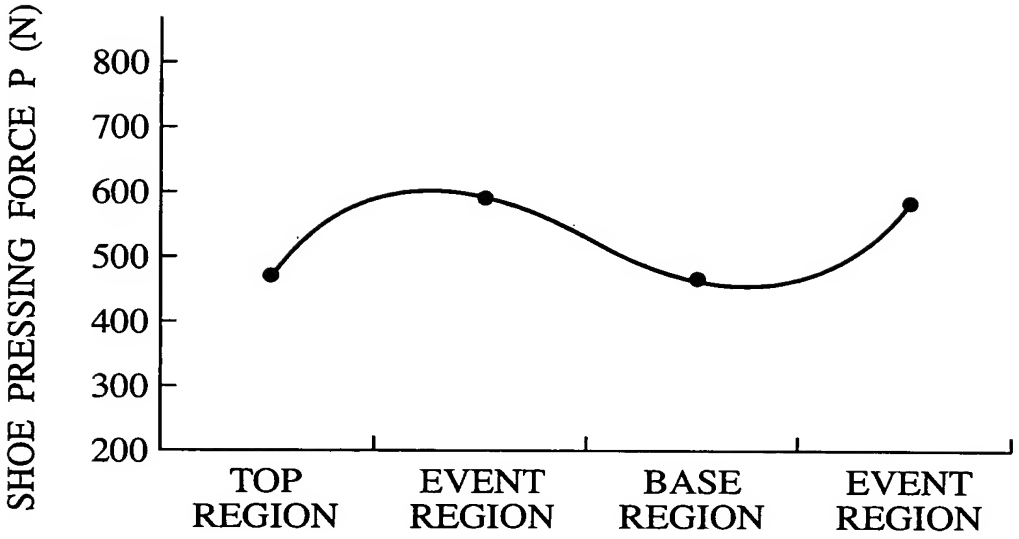

FIG.22B

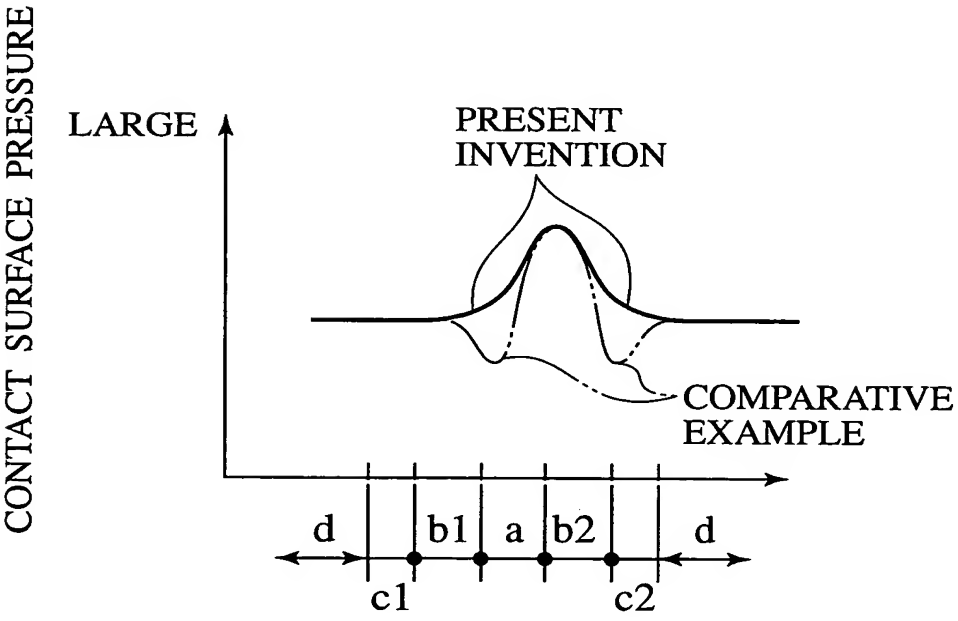

FIG.23A

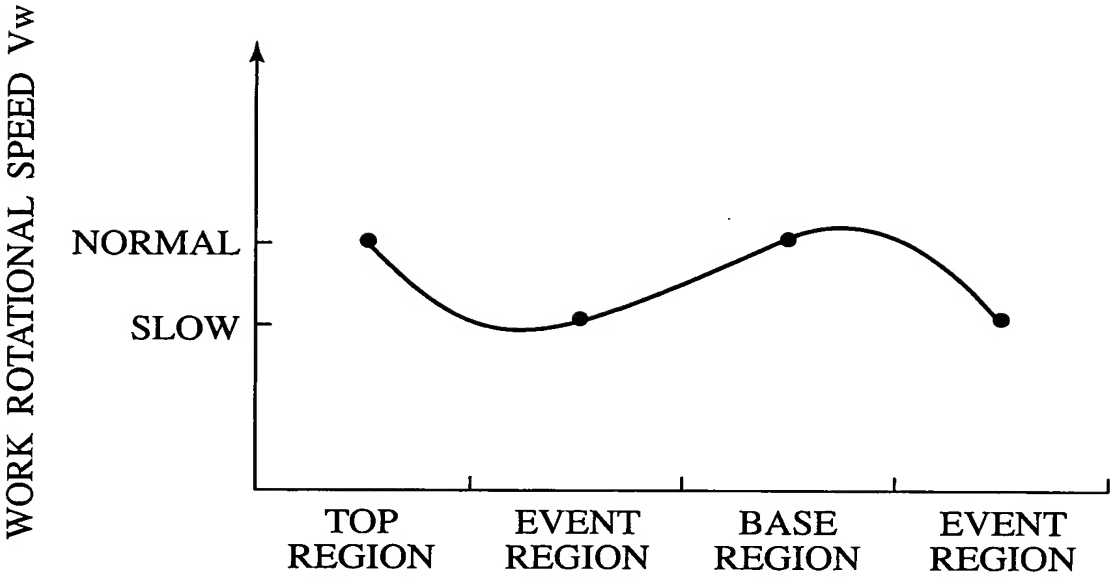

FIG.23B